National Institute of Environmental Health Sciences

Vulnerability to episodes of extreme weather: Butajira, Ethiopia, 1998-1999

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Abstract:

BACKGROUND: During 1999-2000, great parts of Ethiopia experienced a period of famine which was recognised internationally. The aim of this paper is to characterise the epidemiology of mortality of the period, making use of individual, longitudinal population-based data from the Butajira demographic surveillance site and rainfall data from a local site. METHODS: Vital statistics and household data were routinely collected in a cluster sample of 10 sub-communities in the Butajira district in central Ethiopia. These were supplemented by rainfall and agricultural data from the national reporting systems. RESULTS: Rainfall was high in 1998 and well below average in 1999 and 2000. In 1998, heavy rains continued from April into October, in 1999 the small rains failed and the big rains lasted into the harvesting period. For the years 1998-1999, the mortality rate was 24.5 per 1,000 person-years, compared with 10.2 in the remainder of the period 1997-2001. Mortality peaks reflect epidemics of malaria and diarrhoeal disease. During these peaks, mortality was significantly higher among the poorer. CONCLUSIONS: The analyses reveal a serious humanitarian crisis with the Butajira population during 1998-1999, which met the CDC guideline crisis definition of more than one death per 10,000 per day. No substantial humanitarian relief efforts were triggered, though from the results it seems likely that the poorest in the farming communities are as vulnerable as the pastoralists in the North and East of Ethiopia. Food insecurity and reliance on subsistence agriculture continue to be major issues in this and similar rural communities. Epidemics of traditional infectious diseases can still be devastating, given opportunities in nutritionally challenged populations with little access to health care.

Source: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2799308

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event, Food/Water Security, Food/Water Security, Precipitation

Extreme Weather Event: Drought

Food/Water Security: Agricultural Productivity, Food Access/Distribution, Nutritional Quality

Geographic Feature:

resource focuses on specific type of geography

Rural, Urban

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Country

Other African Country: Ethiopia

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Developmental Effect, Infectious Disease, Morbidity/Mortality

Developmental Effect: Reproductive

Infectious Disease: Foodborne/Waterborne Disease, Vectorborne Disease

Foodborne/Waterborne Disease: Other Diarrheal Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children, Elderly, Low Socioeconomic Status

Other Vulnerable Population: Women

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content